Author Index

Altmann, M., see Lobos, E., 135
Anders, R.F., see Peterson, M.G., 279
Anders, R.F., see Smythe, J.A., 227
Araguth, M.F., see Yoshida, N., 39
Ashall, F., see Greig, S., 31

Barrett, J., see Brophy, P.M., 155
Barry, J.D., see Hide, G., 213
Bates, P.A., Hermes, I. and Dwyer, D.M.
Golgi-mediated posttranslational processing of secretory acid phosphatase by *Leishmania donovani* promastigotes, 247
Benaim, G., Bermudez, R. and Urbina, J.A.
Ca^{2+} transport in isolated mitochondrial vesicles from *Leishmania braziliensis* promastigotes, 61
Bermudez, R., see Benaim, G., 61
Bianco, A.E., Robertson, B.D., Kuo, Y.-M., Townson, S. and Ham, P.J.
Developmentally regulated expression and secretion of a polymorphic antigen by *Onchocerca* infective-stage larvae, 203
Bitonti, A.J., see Coons, T., 77
Blanco, S.A., see Yoshida, N., 39
Blum, J.J., see Keegan, F., 235
Bouvier, J., see Eakin, A.E., 1
Brophy, P.M., Crowley, P. and Barrett, J.
Detoxification reaction of *Fasciola* cytosolic glutathione transferases, 155
Bzik, D.J., see Tanaka, M., 127

Cattand, P., see Hide, G., 213
Chen, G.-X., see Zolg, J.W., 257
Christie, J.F., see McGibbon, A.M., 163
Colli, W., see Couto, A.S., 101
Collins, W.E., see Peterson, M.G., 279
Coombs, G.H., see North, M.J., 183
Coons, T., Hanson, S., Bitonti, A.J., McCann, P.P. and Ullman, B.
Alpha-difluoromethylornithine resistance in *Leishmania donovani* is associated with increased ornithine decarboxylase activity, 77
Coppel, R.L., see Smythe, J.A., 227
Couto, A.S., Goncalves, M.F., Colli, W., De Lederkremer, R.M.
The *N*-linked carbohydrate chain of the 85-kilodalton glycoprotein from *Trypanosoma cruzi* trypomastigotes contains sialyl, fucosyl and galactosyl (α1-3)galactose units, 101
Craik, C.S., see Eakin, A.E., 1
Crowley, P., see Brophy, P.M., 155
Curry, S.S., see Giannini, S.H., 9

De Jonckheere, J.F., Majewska, A.C. and Kasprzak, W.
Giardia isolates from primates and rodents display the same molecular polymorphism as human isolates, 23
De Lederkremer, R.M., see Couto, A.S., 101
Desai, J., see Iams, K.P., 47
Dissanayake, S. and Piessens, W.F.
Cloning and characterization of a *Wucheria bancrofti*-specific DNA sequence (*Short Communication*), 147
Doyle, P.S., see Engel, J.C., 69
Dvorak, J.A., see Engel, J.C., 69
Dwyer, D.M., see Bates, P.A., 247

Eakin, A.E., Bouvier, J., Sakanari, J.A., Craik, C.S. and McKerrow, J.H.
Amplification and sequencing of genomic DNA fragments encoding cysteine proteases from protozoan parasites, 1
Elliott, J.F., see Peterson, M.G., 279
Engel, J.C., Doyle, P.S. and Dvorak, J.A.
Isolate-dependent differences in the oxidative metabolism of *Trypanosoma cruzi* epimastigotes, 69
Esteva, M., see Ruiz, A.M., 117

Giannini, S.H., Curry, S.S., Tesh, R.B. and Van der Ploeg, L.H.T.
Size-conserved chromosomes and stability of molecular karyotype in cloned stocks of *Leishmania major*, 9
Godson, G.N., see Sen, K., 173
Goncalves, M.F., see Couto, A.S., 101
González, J., see Yoshida, N., 39
Greig, S. and Ashall, F.
Electrophoretic detection of *Trypanosoma cruzi* peptidases, 31
Gu, H.-M., see Tanaka, M., 127

Ham, P.J., see Bianco, A.E., 203
Hanson, S., see Coons, T., 77
Hermes, I., see Bates, P.A., 247
Hide, G., Cattand, P., LeRay, D., Barry, J.D. and Tait, A.
The identification of *Trypanosoma brucei* subspecies using repetitive DNA sequences, 213

Iams, K.P., Young, J.R., Nene, V., Desai, J., Webster, P., ole-MoiYoi, O.K. and Musoke, A.J.
Characterisation of the gene encoding a 104-kilodalton microneme rhoptry protein of *Theileria parva*, 47
Inselburg, J.W., see Tanaka, M., 127

Karam, M., see Lobos, E., 135
Kasprzak, W., see Jonckheere, J.F., 23
Keegan, F. and Blum, J.J.
Effects of oxygen concentration on the intermediary metabolism of *Leishmania major* promastigotes, 235
Kemp, D.J., see Peterson, M.G., 279
Kemp, D.J., see Smythe, J.A., 227
Kennedy, M.W., see McGibbon, A.M., 163
Kuo, Y.-M., see Bianco, A.E., 203
Kwakyo-Berko, F. and Meshnick, S.
Sequence preference of chloroquine binding to DNA and prevention of Z-DNA formation (*Short Communication*), 275

Lanar, D.E.
Sequence of the circumsporozoite gene of *Plasmodium berghei* ANKA-clone and NK65 strain (*Short Communication*), 151
LeRay, D., see Hide, G., 213
Lee, T.D.G., see McGibbon, A.M., 163
Lewis, A.P.
Sequence analysis upstream of the gene encoding the precursor to the major merozoite surface antigens of *Plasmodium yoelii* (*Short Communication*), 285
Li, W.-B., see Tanaka, M., 127
Lobos, E., Altmann, M., Mengod, G., Weiss, N., Rudin, W. and Karam, M.
Identification of an *Onchocerca volvulus* cDNA encoding a low-molecular-weight antigen uniquely recognized by onchocerciasis patient sera, 135

Majewska, A.C., see De Jonckheere, J.F., 23
Marshall, V.M., see Peterson, M.G., 279
McCann, P.P., see Coons, T., 77
McGibbon, A.M., Christie, J.F., Kennedy, M.W. and Lee, T.D.G.
Identification of the major *Ascaris* allergen and its purification to homogeneity by high-performance liquid chromatography, 163
McKerrow, J.H., see Eakin, A.E., 1
Mengod, G., see Lobos, E., 135
Meshnick, S., see Kwakye-Berko, F., 275
Miller, R.A., Reed, S.G. and Parsons, M.
Leishmania gp63 molecule implicated in cellular adhesion lacks an Arg-Gly-Asp sequence, 267
Moreno, M., see Ruiz, A.M., 117
Musoke, A.J., see Iams, K.P., 47

Nene, V., see Iams, K.P., 47
Nguyen-Dinh, P., see Peterson, M.G., 279
North, M.J., Robertson, C.D. and Coombs, G.H.
The specificity of trichomonad cysteine proteinase analysed using fluorogenic substrates and specific inhibitors, 183
ole-MoiYoi, O.K., see Iams, K.P., 47

Parsons, M., see Miller, R.A., 267
Perkins, M.E., see Sam-Yellowe, T.Y., 91
Peterson, M.G., Nguyen-Dinh, P.,Marshall, V.M., Elliott, J.F., Collins, W.E., Anders, R.F. and Kemp, D.J.
Apical membrane antigen *of Plasmodium fragile* (*Short Communication*), 279
Peterson, M.G., see Smythe, J.A., 227
Piessens, W.F., see Dissanayake, S., 147
Plitt, J.R., see Zolg, J.W., 257

Reed, S.G., see Miller, R.A., 267
Robertson, B.D., see Bianco, A.E., 203
Robertson, C.D., see North, M.J., 183
Rosenstein de Campanini, A., see Ruiz, A.M., 117
Rudin, W., see Lobos, E., 135
Ruiz, A.M., Esteva, M., Subias, E., Moreno, M., Rosenstein de Campanini, A., Velazquez, E. and Segura, E.L.
Monoclonal antibodies against the flagellar fraction of epimastigotes of *Trypanosoma cruzi*: immunoprotection against metacyclic trypomastigotes obtained by immunization of mice with an affinity-purified antigen, 117
Russo, M., see Yoshida, N., 39

Sakanari, J.A., see Eakin, A.E., 1
Sam-Yellowe, T.Y. and Perkins, M.E.
Binding of *Plasmodium falciparum* rhoptry proteins to mouse erythrocytes and their possible role in invasion, 91
Saul, A., see Smythe, J.A., 227
Segura, E.L., see Ruiz, A.M., 117
Sen, K. and Godson, G.N.
Isolation of α- and β-tubulin genes of *Plasmodium falciparum* using a single oligonucleotide probe, 173
Smythe, J.A., Peterson, M.G., Coppel, R.L., Saul, A., Kemp, D.J. and Anders, R.F.
Structural diversity in the 45-kilodalton merozoite surface antigen of *Plasmodium falciparum*, 227
Subias, E., see Ruiz, A.M., 117

Tait, A., see Hide, G., 213
Tanaka, M., Gu, H.-M., Bzik, D.J., Li, W.-B. and Inselburg, J.W.
Dihydrofolate reductase mutations and chromosomal changes associated with pyrimethamine resistance of *Plasmodium falciparum*, 127
Tesh, R.B., see Giannini, S.H., 9
Tielens, A.G.M., Van den Heuvel, J.M. and Van den Bergh, S.G.
Continuous synthesis of glycogen by individual worm pairs of *Schistosoma mansoni* inside the veins of the final host, 195
Tielens, A.G.M., Van den Heuvel, J.M. and Van den Bergh, S.G.
Substrate cycling between glucose 6-phosphate and glycogen occurs in *Schistosoma mansoni*, 109
Townson, S., see Bianco, A.E., 203

Ullman, B., see Coons, T., 77
Urbina, J.A., see Benaim, G., 61

Van den Bergh, S.G., see Tielens, A.G.M., 109
Van den Bergh, S.G., see Tielens, A.G.M., 195
Van den Heuvel, J.M., see Tielens, A.G.M., 109
Van den Heuvel, J.M., see Tielens, A.G.M., 195
Van der Ploeg, L.H.T., see Giannini, S.H., 9
Velazquez, E., see Ruiz, A.M., 117

Webster, P., see Iams, K.P., 47
Weiss, N., see Lobos, E., 135

Yoshida, N., Blanco, S.A., Araguth, M.F., Russo, M. and González, J.
The stage-specific 90-kilodalton surface antigen of metacyclic trypomastigotes of *Trypanosoma cruzi*, 39
Young, J.R., see Iams, K.P., 47

Zolg, J.W., Chen, G.-X. and Plitt, J.R.
Detection of pyrimethamine resistance in *Plasmodium falciparum* by mutation-specific polymerase chain reaction, 257

Subject Index

Acetate, 235
Acid phosphatase, 247
Allelic diversity, 227
Allergen, 163
Animal *Giardia*, 23
Anthelmintic, 155
Antigen, 90-kDa, 39
Antigenicity, 227
Antimalarial, 275
Ascaris, 163

Ca^{2+} homeostasis, 61
Chloroquine, 275
Chromosome, 9
Circumsporozoite protein, 151
Cloned stock, 69
Cysteine protease, 1
Cytochrome content, 69

D-Lactate, 235
Detoxification, 155
Developing larvae, 203
Difluoromethylornithine, 77
Dihydrofolate reductase-thymidylate synthase, 127
cDNA library, 135
DNA probe, 147
DNA sequence, 151, 267
Drug resistance, 77

E-64, 183
East Coast fever, 47
Entamoeba histolytica, 1
Epimastigote stage, 69
Epitope mapping, 47
Experimental immunoprotection, 117

Fasciola hepatica, 155
Filariasis, 147
Fluorimetric calcium indicator, 61
Futile cycling, 109

Gal(α1-31)gal, 101
Genomic expression library, λgt11, 47
Glutathione transferase, 155
Glycogen metabolism, 109, 195
Glycolysis, 235
Glycoprotein, 101
Golgi complex, 247

IgE, 163
Immunoelectron microscopy, 135
Immunoscreening, 47, 135
In vivo, 195
In vivo metabolic labelling, 203
Integral membrane protein, 279
Intercalator, 275
Intracellular parasitism, 267
Invasion, 91
Isoenzyme, 23

Karyotype, 9
Kinetoplastida, 61

Leishmania, 77
Leishmania braziliensis, 61
Leishmania chagasi, 267
Leishmania donovani, 247
Leishmania major, 9, 235
Lipid peroxidation, 155

Major surface glycoprotein, 267
Malaria, 275, 279, 285
Membrane-associated peptidase, 31
Merozoite surface antigen, 227
Metacyclic trypomastigotes, 39
Metallochromic calcium indicator, 61
Metalloprotease, 267
Mitochondrion, 61
Monoclonal antibody, 117
Mouse erythrocyte, 91
Mutant, 77
Mutation-specific primer, 257

Nematode, 163
Nucleic acid sequence, 285
Numerical taxonomy, 213

Onchocerca spp, 203
Onchocerca volvulus, 135
Ornithine decarboxylase, 77
Oxidative metabolism, 69
Oxygen tension, 235
Oxygen utilization, 69

Parasite antigen, 47
Pasteur effect, 235
Peptidase, 31
Peptidyl aminomethylcoumarin, 183
Peptidyl diazomethane, 183
Phosphoglycan, 247
Plasmodia, 275
Plasmodium berghei, 151
Plasmodium falciparum, 91, 127, 173, 227, 257
Plasmodium fragile, 279
Plasmodium yoelii, 285
Point mutation, 257
Polyamine, 77
Polymerase chain reaction, 1, 127, 257
Polymorphism, 203
Polypeptide, 23 kDa, 203

Post-translational modification, 2247
Precursor to the major merozoite surface antigens, 285
Proteinase, 183
Pulsed field gradient, 23
Pulsed-field gradient gel electrophoresis, 9, 127
Pyrimethamine resistance, 257
Pyrimethamine, 127

Repetitive DNA, 213
Reticulocyte, 91
RFLP, 23
Rhoptry protein, 279
Rhoptry protein binding, 91
Ribosomal RNA genes, 213
dsRNA, 23

Schistosoma mansoni, 109, 195
Secretory antigen, 203
Sequence analysis, 227
Single oligonucleotide probe, 173
Speciation, 213
Species specificity, 147
Sporozoite, 47
Substrate cycle, 109
Succinate, 235

Tc-85, 101
Theileria parva, 47
Trichomonas vaginalis, 183
Tritrichomonas foetus, 183
Trypanosoma brucei, 1
Trypanosoma subspecies, 213
Trypanosoma cruzi, 1, 31, 30, 69, 101
Trypanosoma cruzi antigen, 117
Tubulin genes, 173
Turnover of glycogen, 109

Wuchereria bancrofti, 147

Z-DNA, 275

Contents of Volume 39

Number 1, February 1990

Amplification and sequencing of genomic DNA fragments encoding cysteine proteases from protozoan parasites
A.E. Eakin, J. Bouvier, J.A. Sakanari, C.S. Craik and J.H. McKerrow (U.S.A.) 1

Size-conserved chromosomes and stability of molecular karyotype in cloned stocks of *Leishmania major*
S.H. Giannini, S.S. Curry, R.B. Tesh and L.H.T. Van der Ploeg (U.S.A.) 9

Giardia isolates from primates and rodents display the same molecular polymorphism as human isolates
J.F. De Jonckheere, A.C. Majewska and W. Kasprzak (Belgium, Poland) 23

Electrophoretic detection of *Trypanosoma cruzi* peptidases
S. Greig and F. Ashall (U.K.) 31

The stage-specific 90-kilodalton surface antigen of metacyclic trypomastigotes of *Trypanosoma cruzi*
N. Yoshida, S.A. Blanco, M.F. Araguth, M. Russo and J. González (Brazil) 39

Characterisation of the gene encoding a 104-kilodalton microneme-rhoptry protein of *Theileria parva*
K.P. Iams, J.R. Young, V. Nene, J. Desai, P. Webster, O.K. ole-MoiYoi and A.J. Musoke (Kenya) 47

Ca^{2+} transport in isolated mitochondrial vesicles from *Leishmania braziliensis* promastigotes
G. Benaim, R. Bermudez and J.A. Urbina (Venezuela) 61

Isolate-dependent differences in the oxidative metabolism of *Trypanosoma cruzi* epimastigotes
J.C. Engel, P.S. Doyle and J.A. Dvorak (U.S.A.) 69

Alpha-difluoromethylornithine resistance in *Leishmania donovani* is associated with increased ornithine decarboxylase activity
T. Coons, S. Hanson, A.J. Bitonti, P.P. McCann and B. Ullman (U.S.A.) 77

Binding of *Plasmodium falciparum* rhoptry proteins to mouse erythrocytes and their possible role in invasion
T.Y. Sam-Yellowe and M.E. Perkins (U.S.A.) 91

The *N*-linked carbohydrate chain of the 85-kilodalton glycoprotein from *Trypanosoma cruzi* trypomastigotes contains sialyl, fucosyl and galactosyl (α1-3)galactose units
A.S. Couto, M.F. Gonçalves, W. Colli and R.M. de Lederkremer (Argentina, Brazil) 101

Substrate cycling between glucose 6-phosphate and glycogen occurs in *Schistosoma mansoni*
A.G.M. Tielens, J.M. van den Heuvel and S.G. van den Bergh (The Netherlands) 109

Monoclonal antibodies against the flagellar fraction of epimastigotes of *Trypanosoma cruzi*: immunoprotection against metacyclic trypomastigotes obtained by immunization of mice with an affinity-purified antigen
A.M. Ruiz, M. Esteva, E. Subias, M. Moreno, A. Rosenstein de Campanini, E. Velazquez and E.L. Segura (Argentina) 117

Dihydrofolate reductase mutations and chromosomal changes associated with pyrimethamine resistance of *Plasmodium falciparum*
M. Tanaka, H.-M. Gu, D.J. Bzik, W.-B. Li and J.W. Inselburg (U.S.A.) 127

Identification of an *Onchocerca volvulus* cDNA encoding a low-molecular-weight antigen uniquely recognized by onchocerciasis patient sera
E. Lobos, M. Altmann, G. Mengod, N. Weiss, W. Rudin and M. Karam (Switzerland, Burkina Faso) 135

Cloning and characterization of a *Wuchereria bancrofti*-specific DNA sequence (*Short Communication*)
S. Dissanayake and W.F. Piessens (U.S.A.) 147

Sequence of the circumsporozoite gene of *Plasmodium berghei* ANKA clone and NK65 strain (*Short Communication*)
D.E. Lanar (U.S.A.) 151

Number 2, March 1990

Detoxification reactions of *Fasciola* cytosolic glutathione transferases
P.M. Brophy, P. Crowley and J. Barrett (U.K.) 155

Identification of the major *Ascaris* allergen and its purification to homogeneity by high-performance liquid chromatography
A.M. McGibbon, J.F. Christie, M.W. Kennedy and T.D.G. Lee (Canada, U.K.) 163

Isolation of α- and β-tubulin genes of *Plasmodium falciparum* using a single oligonucleotide probe
K. Sen and G.N. Godson (U.S.A.) 173

The specificity of trichomonad cysteine proteinases analysed using fluorogenic substrates and specific inhibitors
M.J. North, C.D. Robertson and G.H. Coombs (U.K.) 183

Continuous synthesis of glycogen by indivudual worm pairs of *Schistosoma mansoni* inside the veins of the final host
A.G.M. Tielens, J.M. van den Heuvel and S.G. van den Bergh (The Netherlands) 195

Developmentally regulated expression and secretion of a polymorphic antigen by *Onchocerca* infective-stage larvae
A.E. Bianco, B.D. Robertson, Y.-M. Kuo, S. Townson and P.J. Ham (U.K.) 203

The identification of *Trypanosoma brucei* subspecies using repetitive DNA sequences
G. Hide, P. Cattand, D. LeRay, J.D. Barry and A. Tait (U.K.) 213

Structural diversity in the 45-kilodalton merozoite surface antigen of *Plasmodium falciparum*
J.A. Smythe, M.G. Peterson, R.L. Coppel, A. Saul, D.J. Kemp and R.F. Anders (Australia) 227

Effects of oxygen concentration on the intermediary metabolism of *Leishmania major* promastigotes
F. Keegan and J.J. Blum (U.S.A.) 235

Golgi-mediated post-translational processing of secretory acid phosphatase by *Leishmania donovani* promastigotes
P.A. Bates, I. Hermes and D.M. Dwyer (U.K., U.S.A.) 247

Detection of pyrimethamine resistance in *Plasmodium falciparum* by mutation-specific polymerase chain reaction
J.W. Zolg, G.-X Chen and J.R. Plitt (U.S.A.) 257

Leishmania gp63 molecule implicated in cellular adhesion lacks an Arg-Gly-Asp sequence
R.A. Miller, S.G. Reed and M. Parsons (U.S.A.) 267

Sequence preference of chloroquine binding to DNA and prevention of Z-DNA formation (*Short Communication*)
F. Kwakye-Berko and S. Meshnick (U.S.A.) 275

Apical membrane antigen of *Plasmodium fragile* (*Short Communication*)
M.G. Peterson, P. Nguyen-Dinh, V.M. Marshall, J.F. Elliott, W.E. Collins, R.F. Anders and D.J. Kemp (Australia, U.S.A.) 279

Sequence analysis upstream of the gene encoding the precursor to the major merozoite surface antigens of *Plasmodium yoelli* (*Short Communication*)
A.P. Lewis (U.K.) 285

Author index 289

Subject index 291

Contents of Volume 39 293

Corrigendum 295